

INL SNF PROGRAM

presented to

**National Spent Nuclear Fuel Program
Technical Exchange Meeting
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presented by

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1.0 The INL EM-Managed SNM Program



CPP-651 Unirradiated Fuel Storage Facility

1.1 INL's SNM Management Strategy

1. Empty CPP-651 by 04/30/05 (accelerated from 09/30/09)

- CPP-651 is the only EM-managed Category I SNM Facility at the INL. Emptying the facility will reduce overall security and program costs at INTEC.**

Anticipated Benefits:

- 1.Consolidation and dispositioning of SNM with appropriate offices at appropriate sites.**
- 2.Close a Security Category Level I facility.
Estimated S&S savings: ~\$2M/yr.**
- 3.Emptying of the Facility.
Estimated Ops savings: ~\$600K/yr.**

1.1 INL's SNM Management Strategy

1a. Complete the Denitrator Repackaging Campaign by 09/30/04

- A. Denitrator Product – Repackage 311 cans (~ 1,776 kg) of highly enriched uranium (high-grade reprocessed fuel product) and ship offsite.**

This material is for reuse under sponsorship of the National Nuclear Security Administration. It will be down blended and fabricated into LEU fuel.

Status and Accomplishments:

Project is complete 09/28/04.

1.1 INL's SNM Management Strategy

1b. Empty the Balance of the Facility (CPP-651) by 04/30/05

Status and Accomplishments:

- B. ANL-W/B Material – Repackage 32 containers into 6 shipping containers for shipment offsite. Project completed 11/07/04.**
- C. ANL-W/C Material – Repackage 16 containers into 3 shipping containers for shipment offsite. Project completed 02/02/05.**
- D. LANL Material – Repackage 190 containers into 44 shipping containers for shipment offsite. Project completed 02/02/05.**
- E. Rover/PARKA Material – Repackage 81 containers into 81 shipping containers for shipment offsite. Project completed 02/02/05.**
- F. PWR Material – Repackage 44 containers into 45 shipping containers for shipment offsite. Project completed 03/15/05.**

1.1 INEEL's SNM Management Strategy

2. Disposition all Remaining EM-Managed Materials by 09/30/09

- **Materials located outside of CPP-651 are likely to require disposal.**

Status and Accomplishments:

- **Other program offices have been alerted to the availability of these materials.**
- **No interest was the response.**
- **Highest risk material (U-233) has been evaluated.**
- **Dispositioning discussions have been initiated.**
- **A basic plan has been established. V**

1.2 Recent Accomplishments for the INEEL SNM Program

Recent accomplishments

FY1997 – Shipped offsite 28.3 kg U (85 containers)

FY1998 – Shipped offsite 175.4 kg U (79 containers)

FY1999 – Shipped offsite 5.2 kg U (15 containers)

FY2000 – Shipped offsite 16.5 kg U (19 containers)

FY2002 – Shipped offsite 5.4 kg U (7 containers)

FY2003 – Shipped offsite 27.0 kg U (15 containers)

FY2004 – Shipped offsite 12.4 kg U (13 containers) Rover/PARKA

**FY2004 – Shipped offsite 1,776 kg U (311 containers) Denitrator
Product**

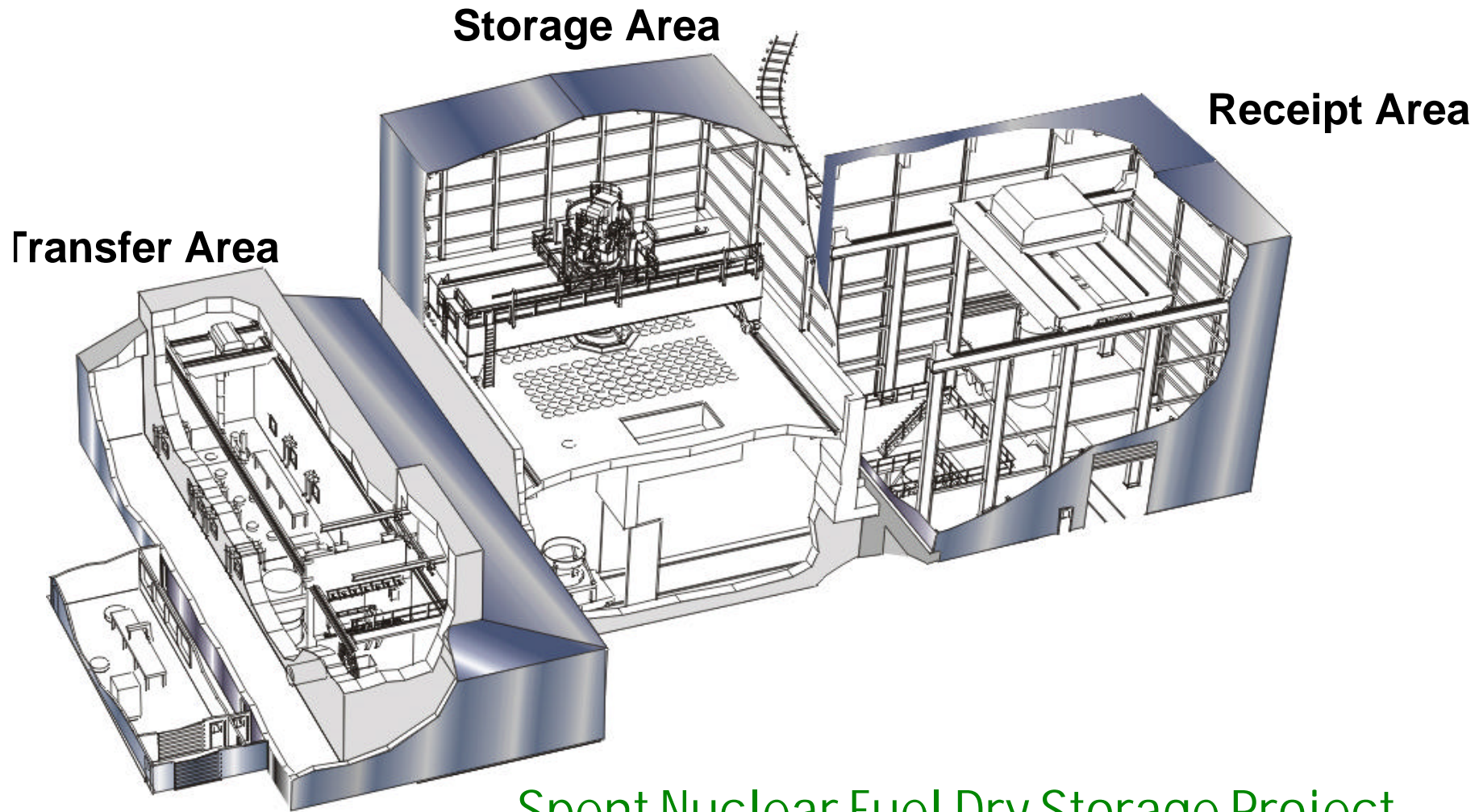
**FY2005 – Shipped offsite 319.2 kg U (179 containers) ANL-W,
Rover/PARKA, LANL, and PWR Materials**

1.3 FY2005 Accomplishments for the INL SNM Program

CPP-651 SNM Removal Performance Campaign - FY 2005

Material	kg U	No. Original Containers/ Items	Final Storage/ Shipping Containers	No. Shipments SSTs	Final Shipment (SSTs) Offsite Date	No. Shipments Commercial	Final Shipment (Commercial) Offsite Date
Rover/PARKA 1	70.386	56	56	2	11/07/04	0	NA
ANL-W/B	10.246	32	6	1	11/07/04	0	NA
ANL-W/C	5.123	16	3	0.1	02/02/05	0	NA
LANL	115.263	190	44	0.9	02/02/05	1	10/27/04
Rover/PARKA 2	31.422	25	25	1	02/02/05	1	02/21/05
PWR	86.740	44	45	2	03/15/05	2	04/05/05
FY05 Subtotal	319.180	363	179	7		4	
PWR Subassembly	5.240	1	1				
Fluorinel	104.555	113	163				
ANL-E	1.480	2	2				
GEFAST	1.100	5	3				
U of WA	0.459	1	1				
Vycor Glass	4.394	412	18				
Total	436.408	897	367	7		4	

2.0 The INEEL EM-Managed Spent Nuclear Fuel Program



2.1 INEEL's Spent Fuel Management Strategy

1. Perform national responsibilities:

- Receive domestic fuels; and
- Receive FRR fuels.

Status and Accomplishments:

- 46 truck cask equivalents during the period FY98-FY04

FY	1998	1999	2000	2001	2002	2003	2004	2005	Total
FRR	3	5	1	3	0	1	2	0	15
DRR	0	0	0	0	0	31	2	0*	33
Total	3	5	1	3	0	32	4	0	46

* Receipts scheduled for later in the year.

2.1 INL's Spent Fuel Management Strategy

2. Address vulnerabilities:

- Place wet stored SNF into interim dry storage by 12/31/23.

Status and Accomplishments:

- As of 09/15/03, five of six wet storage pools containing EM-managed legacy SNF have been emptied.
- The sixth must be emptied by 12/31/2023¹ ? 09/30/2012².

SNF Wet Storage Facility	Date Emptied
TRA-660, ARMF/CFRMF Canal	10/28/1997
CPP-603, Basins	04/28/2000
TRA-603, MTR Canal & Plug Storage	09/24/2002
TAN-607, Basin	09/29/2002
PBF-620, Pool	09/15/2003
PP-666, Basins	09/30/2012 (planned)

1 - Idaho Settlement Agreement; 2 - Planning commitment

2.1 INL's Spent Fuel Management Strategy

3. Consolidate spent fuel storage areas:

- **Relocate all SNF into a single management area at INTEC.**

Status and Accomplishments:

- **As of 10/26/04, all SNF facilities throughout the site containing EM-managed legacy SNF have been consolidated at INTEC.**

SNF Storage Facility	Date Emptied
TRA-660, ARMF/CFRMF Canal	10/28/1997
TRA-603, MTR Canal & Plug Storage	09/24/2002
TAN-607, Basin	09/29/2002
PBF-620, Pool	09/15/2003
TAN-791, Dry Storage Pad	10/26/2004

2.1 INL's Spent Fuel Management Strategy

4. Make DOE-owned legacy SNF road-ready:

- Support removal from Idaho and Colorado by 01/01/35.**

Status and Accomplishments:

- DOE determines to design, NRC-license, build and operate the SNFDSP.**

12/92	Initial Feasibility Studies published.
11/94	Second Short Data Form submitted requesting 1998 LICP funding.
03/96	Mission Need Document for SNF DS Project.
06/96	Project validated as a 1998 LICP.
01/97	DOE redefines acquisition strategy from standard LICP to a privatization procurement.
01/99	DOE releases RFP.
05/00	DOE awards contract to Foster Wheeler.
11/01	The license application was submitted to the NRC.
03/02	The NRC accepted the license application for formal review.
11/04	NRC grants license. V

2.2 FY2005 Accomplishments for the INL SNF Program

10/26/04 – Transferred the last of six outdoor dry storage casks containing spent nuclear fuel from the TAN-791 SNF dry storage pad to the newly constructed CPP-2707 SNF dry storage pad.

This completes the final activity for consolidation of EM-managed SNF to INTEC.

2.2 FY2005 Accomplishments for the INL SNF Program

01/29/05 – Completed transfer of standard TRIGA SNF from wet storage in CPP-666 to dry storage in CPP-603/IFSF.

This milestone begins the larger campaign for emptying the last EM-managed underwater SNF storage facility, CPP-666 (FAST).

2.2 FY2005 Accomplishments for the INL SNF Program

03/31/05 – Transferred SHADO 1 out of the South Basin of CPP-603.

Measuring 12" x 2.5" x .0625", a small, high-activity debris object (SHADO) was found during basin scanning. Analysis shows SHADO 1 may contain up to 3 g Uranium. As a result, it was determined to treat SHADO 1 as a fuel-like object.

This removes the last fuel-like object from the basins and permits preparation for deactivation activities.

3.0 The Future

3.1 Projected Accomplishments

- **Initiate construction of the SNFDSP.**
- **All EM-managed SNM out of CPP-651 by 04/30/05.**
- **All EM-managed SNM will have been shipped offsite by 09/30/2009.**
- **The last wet storage facility will be emptied with the transfer of SNF managed at CPP-666 to several dry storage facilities located at INTEC, ANL-W and NRF by 09/30/2012.**

3.0 The Future

3.2 A New Contract

3.2.1 INL/NE Contract

On November 9, 2004, DOE awarded the Battelle Energy Alliance, LLC (BEA) a \$4.8 billion, 10-year contract to transform the Idaho National Laboratory (INL) into the “preeminent” national nuclear energy laboratory.

3.0 The Future

3.2 A New Contract

3.2.1 INL/NE Contract

On February 1, 2005, BEA assumed the management and operational responsibility for the INL, following a transition period lasting nearly three months.

3.0 The Future

3.2 A New Contract

3.2.1 INL/NE Contract

BEA is owned by the Battelle Memorial Institute. Team members include:

- BWXT Services Inc. of Lynchburg, VA;**
- Washington Group International of Boise, ID;**
- The Electric Power Research Institute; and**
- The Massachusetts Institute of Technology.**

3.0 The Future

3.2 A New Contract

3.2.2 INL/EM Contract

On March 23, 2005, DOE awarded CH2M-WG Idaho (CH2M-WGI) a \$2.9 billion contract to lead a seven-year Idaho Cleanup Project (ICP) at the INL.

3.0 The Future

3.2 A New Contract

3.2.2 INL/EM Contract

On May 1, 2005, the team will assume control of all cleanup activities, assuming no protest, after a transition period of just more than a month. The contract runs through September 20, 2012.

3.0 The Future

3.2 A New Contract

3.2.2 INL/EM Contract

Team members include:

- **CH2M HILL of Denver, CO;**
- **Boise-based Washington Group of Boise, ID; and**
- **Premier Technology of Chubbuck, ID.**

3.0 The Future

3.3 The ICP Contract

Effective 05/01/05, the INL EM-managed SNF and SNM programs will have expanded scope.

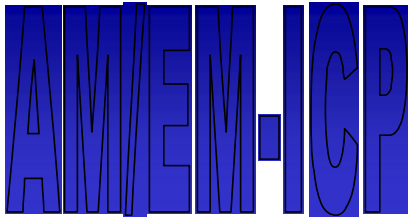
The programs will receive and manage certain materials from the NE program. The contractor shall:

- 1. Transfer approximately 5kg of SNF (listed in Table C.7 of the RFP) from TRA to safe storage at INTEC by September 30, 2009.
[13 separate items/categories of material; ~ 4.5 kg U.]**
- 2. Dispose or disposition approximately 417 kg of SNM (listed in Table C.6 of the RFP) from TRA to an approved DOE or commercial disposal or storage facility by September 30, 2009.
[47 separate items/categories of material; ~ 416.5 kg U.]**

3.0 The Future

3.4 Programmatic Reorganization at the INL

- **The Future is Now!**
- **The Future is Here!**
- **You too can be reorganized!**
- **Know where the chair is when the music stops!**



Environmental Management Idaho Cleanup Project

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R.C. Stump
J.L. Wells
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***Term Employees**
****Co-Op Employees**

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